Opportunities to **Increase the Sustainability** of your Project

ARC Guideline Information Sessions

September 2009

Land & Community Revitalization
BROWNFIELDS

EPA
New England

Sustainability in the Guidelines

4. Project Benefits

Under this criterion, proposals will be evaluated on the extent to which the project's anticipated outcomes promote general welfare through the improvement of the public health and safety, economy, and environment of the targeted community and how these outcomes will contribute to your overall community "vision" for the revitalization of brownfield sites. Consideration will be given to how public health issues are addressed during the project, the anticipated benefits of redevelopment, and the incorporation of sustainable practices.

a. Welfare and/or Public Health

b. Economic Benefits and/or Greenspace

c. Environmental Benefits from Infrastructure Reuse/Sustainable Reuse

Assessment – 25pts **Cleanup – 30pts** **RLF – 20pts**

Sustainability Success

In Proposals

	Examples of Positive Proposal Components	Examples of Negative Proposal Components
Economic Benefits and/or Greenspace	- An opportunity for community groups to carry out gardening/ landscaping, hold events, and encourage residents to be a part of park maintenance and beautification. - Benefits include a community parking lot, native landscaping, decorative lighting, and public art. - Good narrative that touches on economic and non-economic benefits. - Good numbers and references.	- Did not provide any information on economic benefits. - No discussion of green space, a comprehensive plan, or smart growth. - Would have included economic benefits of preventing stated immanent threat of drinking water aquifer contamination. - No attempt to quantify the anticipated outcomes. - Does not focus on site to be remediated.
Environmental Benefits from Infrastructure Reuse/ Sustainable Reuse	- Utilities exist for the lighting and maintenance. - LID stormwater management will be incorporated. - Goal is to use 98% of demolition materials in accordance with LEED. - Will comply with town requirements and state guidelines on green building. - Will minimize impact of remediation through green remediation techniques.	- Says they will follow and implement initiatives but not how they will. - Does not discuss infrastructure reuse. - No mention of construction & demolition recycling/reuse. - Does not make the connection between green use and economic benefits. - No policy, resources or plans cited to support stated sustainability goals.

Sustainability Success

In Projects

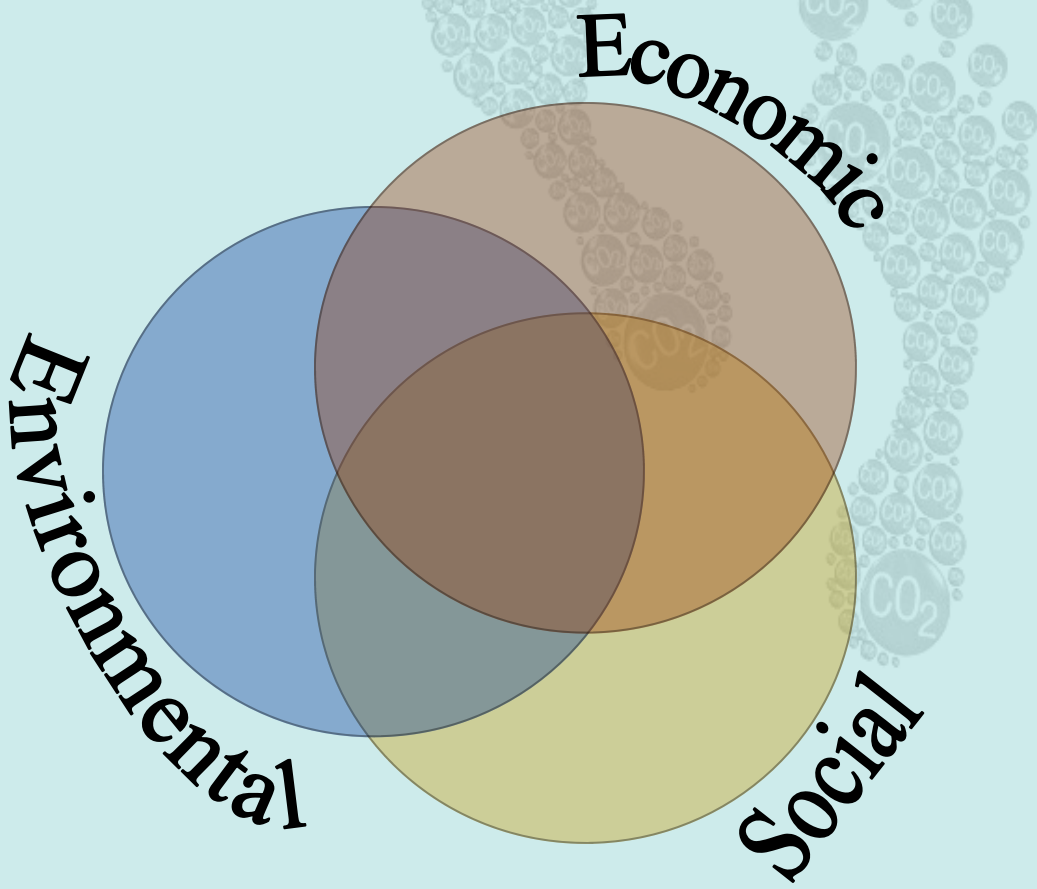
Riverfront Community Center	Glastonbury	CT	Green Space, Public Access
Ledyard City Park	Ledyard	CT	Green Space, Public Access
Urban Oaks Organic Farm	New Britain	CT	Local Food Supply, Green Space
Green Condos	New London	CT	Green Building
Occum Park	Norwich	CT	Green Space, Public Access
Farmer's Market Site	Shelton	CT	Local Food Supply, Public Access
Bunker Hill Park	Waterbury	CT	Green Space, Public Access
Brockton Brightfields	Brockton	MA	Renewable Energy Development
Fitchburg Riverfront Park	Fitchburg	MA	Green Space, Public Access
Meeting Street School	Providence	RI	Green Building
Save the Bay Center	Providence	RI	Green Building, Habitat Restoration, Open Space, Public Access
Waterfront Residences	Burlington	VT	Green Building, Affordable Housing
Bates Mill	Lewiston	ME	Building/Material Reuse

Aspects of Sustainability

Environmental

Social

Economic



Aspects of Sustainability

	Resources & Assets of Your Project		
	Environmental	Social	Economic
Site	- Stormwater/Flood Control - Habitat - Clean Air/Soil/Water	- Connection to the Community - Access - History of the Site	- Site Marketability - Taxes - Property Values - Site Use Supplies a Demand
Community	- Drinking Water - Air Quality - Open Space - Stormwater/Flood Control	- Housing - Schools - Recreation - Connectivity - Cultural Features	- Local Business - Tourism - Taxes - Jobs - Development
Overall	- Ecosystems - Clean Air/Soil/Water - Climate - Food Supply	- History - Labor Supply - Culture - Population Patterns	- Economic Incentives - Market Trends - Supply and Demand

Aspects of Sustainability

Some Potential Benefits of Sustainability Measures

- **Green Remediation**
  - Lower operating costs
  - Avoidance of potential mitigation costs
  - Funding available for pilot projects and diesel retrofits.
- **Planning and Design**
  - Funding available for pilot projects and innovative design
  - Keep community needs and spending local
  - Attractant for new businesses
- **Site Use and Maintenance**
  - Lower operating costs
  - Higher property value
- **Community Benefits**
  - Promotion of further economic development
  - Green job creation
  - Reduced drain on water and energy
- **Think Globally**
  - Less dependence on fluctuating fuel market
  - Use of local resources keeps revenue local
  - Decreased contribution to economically threatening climate change factors

Opportunities and Benefits

- FY09 Sustainability Pilots
- Sources of Support
  - Smart Growth
  - Renewable Energy
  - Water Efficiency
  - Green Building
  - Green Remediation
  - Funding and Cost Analysis

Sustainability Pilots

Jackson Square Redevelopment

Roxbury, MA

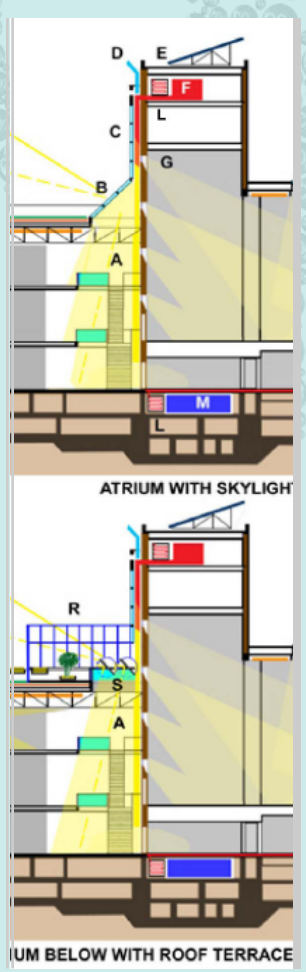
- EPA hired a contractor to develop a summary of recommendations for green roof systems for each building type at the site.
- Report documents the pros and cons of three green roof systems to enable the best strategies for incorporating green roofs into cleanup and site preparation.
- The recommendations include:
  - an overview of the site preparation and cleanup costs associated with each system
  - a summary of potential maintenance issues
  - a review of the potential structural and drainage systems that may need to be integrated into the overall site preparation
  - a summary of the energy performance and water demand impacts.

Sustainability Pilots

Moran Center Redevelopment

Burlington, VT

- EPA hired a contractor to develop a report consisting of analyses and recommendations in support of the energy and environmental goals of the project.
- Items included in the analyses are:
  - sustainable energy features
  - green building features
  - stormwater, water quality and landscape details
  - site design for sustainable transportation and linkage to downtown
  - proposed building uses
  - program opportunities presented by community and tourism programs
  - long-term property management and promotion of green features.
- Green elements are prioritized in terms of cost, and promise to demonstrate lessons that can be replicated.



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- FY09 Sustainability Pilots
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Sources of Support

Smart Growth

- U.S. EPA Resources
  - Brownfields – Sustainability and Public Health
    http://www.epa.gov/brownfields/publications/sph.htm
  - Smart Growth and Water – Resources and Tools
    http://www.epa.gov/watertrain/smartgrowth/resources/index.htm
- SustainLane Government
  http://www.sustainlane.us/
- Smart Growth Network
  http://www.smartgrowth.org/
- Playbook for Green Buildings & Neighborhoods
  http://www.greenplaybook.org/
- LEED for Neighborhood Development (ND)
  http://www.usgbc.org/
- MA Smart Growth/Smart Energy Toolkit
  http://www.mass.gov/envir/smart_growth_toolkit/

Sources of Support

Renewable Energy and Energy Efficiency

- EPA Study and Guidance on Siting Renewable Energy Development on Contaminated Land
  http://www.epa.gov/renewableenergyland/
- General EPA guidance on the use of renewable sources of energy such as solar, wind, geothermal or biomass

  http://www.epa.gov/cleanenergy
- EPA Green Power Partnership
  http://www.epa.gov/grnpower/
- EPA guidance on using energy efficient appliances and fixtures.
  http://www.energystar.gov

Sources of Support

Water Efficiency and Stormwater Management

- EPA Guidance on Water Efficiency
  http://epa.gov/owm/water-efficiency/index.htm
  http://epa.gov/owm/water-efficiency/water/index.htm
- EPA Guidance on Low Impact Development (LID) or Storm Water Retention
  http://epa.gov/owow/nps/lid
  http://cfpub.epa.gov/npdes/home.cfm?program_id=6
  http://cfpub.epa.gov/npdes/stormwater/const.cfm
  (*specifically related to construction concerns*)
- LID Urban Design Tools (and Clearinghouse)
  http://www.lid-stormwater.net/
  (http://www.lid-stormwater.net/clearinghouse/)

Sources of Support

Green Building

- EPA Guidance on Construction and Demolition Recycling:
  http://www.epa.gov/epawaste/conserve/rrr/imr/cdm/index.htm
  http://www.epa.gov/brownfields/tools/cdbrochure.pdf
- EPA Guidance on Green Building
  http://www.epa.gov/ne/topics/envpractice/gbuildings.html
- U.S. Green Building Council
  http://www.usgbc.org/
- Nexus Green Building Resource Center, Boston, MA
  http://www.nexusboston.com/
- Global Green USA – Green Cities, Schools and Affordable Housing
  http://www.globalgreen.org/greenurbanism/

Sources of Support

Green Remediation

- *Green Remediation is defined by the EPA as "the practice of considering all environmental effects of remedy implementation and incorporating options to maximize net environmental benefit of cleanup actions."*
- EPA Guidance on Green Remediation
  http://www.clu-in.org/greenremediation/
- EPA Green Cleanup Standard Initiative (*under development*)
  http://www.cluin.org/greenremediation/subtab_b5.cfm
  http://www.astm.org/DATABASE.CART/WORKITEMS/WK23495.htm
- Sustainable Remediation Forum (SURF)
  http://www.sustainableremediation.org/
- International Conference on Green Remediation
  Amherst, MA – June 15 -17 2010
  http://www.umass.edu/tei/conferences/GreenRemediation/GreenHome.html
- EPA Guidance on Diesel Emission Reduction
  www.epa.gov/cleandiesel

Sources of Support

Funding and Cost Analysis

- Reducing Stormwater Costs through LID Strategies and Practices
  http://www.epa.gov/owow/nps/lid/costs07/
- Green Values Stormwater Toolbox
  http://greenvalues.cnt.org/green-infrastructure
- Federal Tax Credits for Energy Efficiency
  http://www.energystar.gov/index.cfm?c=products.pr_tax_credits
- Economic Benefits of LID
  http://www.econw.com/casestudies/casestudy?study=low-impact-development
- Eco-Efficiency Learning Module
  http://www.wbcsd.org/plugins/DocSearch/details.asp?type=DocDet&ObjectId=MTgwMjc
- BEES 4.0 – Building for Environmental and Economic Sustainability
  http://www.bfrl.nist.gov/oae/software/bees/
- EPA Environmentally Preferable Purchasing
  http://www.epa.gov/opptintr/epp/

Let’s Recap

Sustainability is in the Guidelines.

Learn from past proposal and project success.

Sustainability is an environmental, social AND economic consideration.

There are many resources and support opportunities available for your project.

Any Questions?

Contact Information:

Jessica Dominguez
Brownfields Program,
Sustainable Reuse Lead

U.S. EPA – Region 1
One Congress Street
Suite 1100 (HBT)
Boston, MA 02114

Phone: (617) 918-1627
Email: dominguez.jessica@epa.gov
Web: http://www.epa.gov/region1